

REMARKS

Claims 1, 3-10 and 17-79 were pending at the time of examination. Claims 1, 4, 32, 51-52 and 63-64 have been amended. No new matter has been added. Line numbering has been added to all the claims, as requested. The applicants respectfully request reconsideration based on the foregoing amendments and these remarks.

Claim Rejections – 35 U.S.C. § 101

Claims 51 and 63 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter, since “computer program product” and “computer readable program code” is not operating on a tangible medium. The applicants have amended the preambles of claims 51 and 63 to recite a computer program product that is stored on a machine-readable medium. The applicants submit that claims 51 and 63 as amended are directed to statutory subject matter, and request that the rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 4, 7-8, 10, 17-29, 31-55, 57-74 and 76-79 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,526,044 to Cookmeyer, II et al. (hereinafter Cookmeyer) in view of U.S. Patent 6,470,385 to Nakashima et al. (hereinafter Nakashima). The applicants respectfully traverse the rejection for the following reasons.

The preamble of claim 1 has been amended to more clearly specify that the method is directed to routing application-level messages from one or more sending services to one or more recipient services across a message interchange network, in order to more precisely define the subject matter of the invention. Broadly stated, the message routing method of claim 1 routes an application-level message from a sending service to a recipient service through one or more in-transit services that may perform a range of operations on the message as it travels from the sending service to the recipient service. The operations performed by the in-transit services alter the content of the message, such that the recipient service receives the message in a proper format, thereby enabling the recipient service to do further processing on the message, if needed.

Cookmeyer, on the other hand, is directed to a knowledge base system which uses a “protocol analyzer” to acquire real time statistical data on network signal traffic in a monitoring session. The session performance history is then reported as a real time composite of measured statistics and analysis-derived statistics, together with a real time report of discarded frames (Cookmeyer, Abstract). All the statistical data that is gathered in Cookmeyer is related to low-

level frame processing, which is clearly different from the high-level application message routing and processing that is specified in claim 1. That is, generally speaking, Cookmeyer does not perform any identifiable operations on messages that are sent between sending services and recipient services in a message interchange network, but merely performs a passive monitoring of the network performance on a frame-level without interacting with the content of the frames themselves.

As described in claim 1, an application-level message in accordance with the invention includes a header element and at least one of a body element and an attachment. The body element and the attachment, respectively, include one or more documents that a sending service is sending to a recipient service. The application-level messages are described and exemplified in numerous places throughout the specification, for example, in paragraphs [1057]-[1059], [1118]-[1126], and in appendices A and B.

A frame, on the other hand, can generally be described as a piece of a message transmitted over a packet-switching network. These message pieces are sent across a network from a sender to a recipient, where they are put together to form the original message. Frames have headers, and data sections, but these are typically only sufficient to specify a destination for the frame and transport a small amount of data from the original message, cannot contain any documents in its body section, and does not have any attachments including documents, as recited in claim 1. A frame does not carry any meaning by itself, but only makes sense after it has been combined with other frames to form a message. FIG. 3 of Cookmeyer and col. 6, lines 1-18, provide more particulars about the Ethernet network frames used in Cookmeyer. The applicants submit that the phrase "application-level message" is used in claim 1 in a manner that is completely clear to a person of ordinary skill in the art, and that there is no risk of misinterpreting an application-level message that includes a header element and a body element (and/or an attachment) with documents, to be a frame. The interpretations of "application-level message" and "frame" are further supported in the specifications of both the pending application and in Cookmeyer, as well as in the general literature.

Next, step (b) of claim 1 further requires that the route path includes one or more in-transit services. The route path determination may be based on several factors, such as a reference to a service identified in the message's header element, a routing script specified by the sender, by the recipient, or by an in-transit service. The Examiner alleges this is shown in Cookmeyer and attempts to piece together a number of sections of Cookmeyer to support this argument. First the Examiner states "Routers determines the path to take towards destination" and cites a number of sections of Cookmeyer that supports this statement. The applicants have

no objection to this statement *per se*, but respectfully submit that the routers operate on a frame level and use frame header data to determine a best path for forwarding frames between two points in a network. As is further specified in the claim limitation, the route path is determined "based on one or more of: a reference to a service identified in said header element, a routing script defined by a sending service, a routing script defined by a recipient service, and a routing script defined by an in-transit service." No such determination is shown in Cookmeyer. The Examiner cites col. 14, lines 35-67, which describes an algorithm for detection of suspected IP routing loop events. The cited section (and the rest of Cookmeyer) is silent about any types of references to services or routing scripts, as Cookmeyer is not directed to how to route frames or messages through a network, but is instead focused on collecting and analyzing statistical data on network traffic.

Step (c) of claim 1 specifies that the in-transit service, which is always included in the route path for the message, performs an operation on the message that alters the message's content, so that the message has a proper format for the recipient service. The Examiner alleges the in-transit service is shown in col. 14, lines 35-67 of Cookmeyer and states "wherein the in-transit services monitors the statistics of the network." The applicants respectfully disagree. Again, Cookmeyer monitors the network traffic by sampling frames on the network and analyzing them. There is no requirement that all frames, and certainly not messages, must be analyzed in Cookmeyer. Furthermore, the analysis of the frames is a separate process, which is not performed as step that is incorporated in the normal routing or delivery of the frames. Furthermore, a monitoring operation is a "passive" operation in that it merely observes the states of things rather than actually operating on the content of the frame that is being delivered.

The Examiner acknowledges that Cookmeyer does not teach that the operations performed by the in-transit service alters the content of the message to ensure that the message has the proper format for the recipient service. Therefore, the Examiner relies on Nakashima to cure this deficiency. Nakashima is directed to a network monitoring system "which alleviates workloads imposed on network devices being monitored, reduces network traffic, improves the quality of data transmission, and increases the efficiency of monitoring activities" (Nakashima, Abstract). In particular, the Examiner relies on col. 2, lines 50-55 and col. 3, lines 5-10. These sections describe monitoring controllers that are coupled to monitoring stations. Each monitoring controller comprises a "status message format conversion unit" that converts status messages received from a broadcast unit to a format suitable for the monitoring station that is coupled to the monitoring controller. The applicants acknowledge that the status message format conversion unit performs a conversion of the message format. However, the message that is

converted is not a message that is sent from a sending service to a recipient service and can contain attachments, as required by claim 1, but a status message that is broadcast only as a consequence of a status change being detected in the system.

In order to establish a *prima facie* case of obviousness, the Examiner must show a motivation to combine Cookmeyer and Nakashima. Cookmeyer is directed to monitoring network performance, and there is nothing in Cookmeyer that suggests that there would be a desire to alter the content of the frames that travel through the network. Even if there were such a desire, a person of ordinary skill in the art would not look at Nakashima, which converts broadcast status messages that are not part of the regular network traffic. The motivations provided by the Examiner ("eliminate redundant network traffic, improve the quality of data transmissions and to improve efficiency in network monitoring activities") are either very general statements or statements specified to network monitoring applications, which are not part of the applicants' invention. Furthermore, the Examiner needs to show a reasonable expectation of success, which the Examiner has failed to do since he has not shown how a person of ordinary skill in the art would use the teachings of Nakashima to cure the deficiencies of Cookmeyer. Finally, the combination of the references must teach or suggest all the claim limitations. Even if it were possible to combine Cookmeyer and Nakashima, the combination still would not cure the above mentioned deficiencies of Cookmeyer. For at least these reasons, the rejection of claim 1 is unsupported by the art and should be withdrawn.

Dependent claims 6, 9 and 75 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cookmeyer in view of "Official Notice." The applicants respectfully traverse the rejection for the following reasons. The "Official Notice" relates to that the use of SOAP (Simple Object Access Protocol) would have been well known and expected in the art as a network communication method, and to that the context and advantages of providing text data in a packet is well known, respectively. The applicants do not disagree with these statements. However, they do in no way cure the deficiencies of Cookmeyer discussed above with respect to claim 1 (even if these features were used in additional view of Nakashima, which the applicants assume was intended by the Examiner). For at least these reasons, the rejection of claims 6, 9 and 75 is unsupported by the art and should be withdrawn.

Dependent claims 3 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cookmeyer. Claims 3 and 5 specify that the header and data, respectively, of the message includes XML (eXtensible Markup Language) data. The Examiner states "The language of implementation is inconsequential for the invention as a whole and presents no new or unexpected results, so long as the message is analyzed and monitored by services. Therefore, to

have the software platform implemented in XML in Cookmeyer would have been a matter of obvious design choice to one of ordinary skill in the art..." Claims 3 and 5 depend from claim 1, which was found above to be neither anticipated nor rendered obvious by Cookmeyer. Implementing the Cookmeyer platform in XML would therefore not render claims 3 and 5 any more obvious than claim 1 alone, and it is therefore respectfully submitted that the rejection of claims 3 and 5 be withdrawn.

Dependent claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cookmeyer in view of U.S. Patent Publication No. 2002/0013854 to Eggelston et al. (hereinafter Eggelston). The applicants respectfully traverse the rejection for the following reasons. Eggelston is used by the Examiner to show logging of billing information. Claim 30 depends from claim 1, which was found above to be neither anticipated nor rendered obvious by Cookmeyer. Assuming it were possible to add the billing logging function of Eggelston to Cookmeyer, it would still not render claim 30 any more obvious than claim 1 alone, as it does not cure any of the other deficiencies of Cookmeyer. It is therefore respectfully submitted that the rejection of claim 30 be withdrawn.

Claim 32 is directed to a message routing system and was rejected for the same reasons as the rejection of claim 1 and is therefore allowable for at least the reasons discussed above with respect to claim 1.

Claim 51 is a *Beauregard* claim corresponding to claim 1, and is therefore neither anticipated nor obvious for at least the reasons discussed above with respect to claim 1, and the rejection of claim 51 should be withdrawn.

Claim 52 is directed to a message routing network method, and was rejected at least in part for the same reasons as claim 1 (the applicants assume the Examiner did not intend to cite canceled claim 2 in this rejection). Thus, the applicants respectfully request that the rejection of claim 52 be removed for the same reasons as the rejection of claim 1, discussed above.

Claim 63 is directed to a computer program product and was rejected for the same reasons as the rejection of claim 1 (again, the applicants assume the Examiner did not intend to cite canceled claim 2 in this rejection), and is therefore allowable for at least the reasons discussed above with respect to claim 1.

Claim 64 is directed to a message routing system. The system includes a message routing network having an interface that enables a plurality of services to post application-level messages to and receive application-level messages from the message routing network. At least a portion of the services provide a menu of data operations that can be selectively applied to a message traversing the message routing network. The Examiner alleges this is shown in

Cookmeyer, but the applicants respectfully disagree. Cookmeyer, as discussed above, does not show operations that can be applied to a message traversing the message routing network, and it certainly does not show a menu of data operations that can be selectively applied to the messages, as required by claim 64. Thus, the applicants respectfully submit that the rejection of claim 64 be withdrawn.

The Examiner's rejections of the dependent claims are also respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 3-10 and 17-31 each depend directly from independent claim 1 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claim 1. Claims 33-50 each depend directly from independent claim 32 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claim 32. Claims 53-62 each depend directly from independent claim 52 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claim 52. Claims 65-79 all depend from claim 64, and are therefore neither anticipated nor obvious for at least the reasons discussed above with respect to claim 64, and the rejections of claims 65-79 should be withdrawn.

Conclusion

The applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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